



GROB G115C/G115D-*Acro*



**A new experience in the
fascinating
world of flying**



A new experience in the fascinating world of flying



The 22nd of March 1987 was a milestone in the history of composite aircraft construction. On that date the GROB G115 two seater, fully composite light aircraft was type certificated by the Federal German Aviation Authority LBA. Less than a year later the aircraft was type certificated by the American FAA, becoming the world's first fully composite aircraft to be type certificated by the American authorities. This special event represented the pioneering spirit of the GROB Aircraft company.

Since then the G115 has proven itself worldwide and has become increasingly popular. This encouraged us to redesign the basic version. All customer proposals for improvements were carefully analy-

sed. Particular emphasis was placed on the needs of military and commercial pilot training organizations.

The result was the G115C and the aerobatic G115D which we proudly introduce on the following pages. Both aircraft are a symbiosis of innovative technology and timeless elegance. To ease your curiosity, here are a few technical improvements incorporated in the new G115:

- more powerful Lycoming engines from 160 to 180 HP
- control stick or yoke
- wing tanks
- fixed pitch two-blade or constant-speed three-blade propeller
- seats with back parachute storage
- generously proportioned instrument panel
- large baggage compartment

As you already know, the ruling principle at GROB is to build the complete airframe in composite materials. What advantages does this offer you as a prospective G115 owner?

Due to the high strength of the composite materials used, a low weight is achieved. This increases the payload. You can

equip your aircraft as you wish – including full IFR equipment – what remains for the payload will not give you any nasty surprises. Composite materials do not suffer from fatigue and are absolutely free of corrosion. Because the airframe is completely maintenance-free, servicing requirements are reduced to a minimum. But don't worry, should a repair be necessary on a composite component, the simplicity of the process means that these can be carried out easily and inexpensively anywhere in the world. In flight the high-quality surface finish and airfoil accuracy provide a previously unattained aerodynamic quality. This means that for a given engine power an increase in speed and range of 20 to 30 percent is achieved. This is quite apart from the appearance of the perfect surface finish.

When you buy a G115, you not only buy a technically mature, economical high-tech product, we will spoil you with our product support and our past record has shown that we are always there when you need us.

But let the following pages entice you into the high-tech world of the G115!

Advantages of composite construction:

- no corrosion
- no material fatigue, even after years of service
- lightweight construction
- high strength
- high stiffness
- high quality surface finish
- airfoil and assembly accuracy
- low-cost, quick and easy accident damage repairs

The comfort



The **G115C instrument panel** has plenty of room for additional instrumentation, right up to complete IFR installation. We have made sure that all instruments are perfectly readable by day and night.

This is provided by a cleverly designed instrument panel coaming, and instrument lighting which makes night flying a safe and memorable experience.

The cockpit

A characteristic of all GROB aircraft is the ergonomic design of the cockpit.

Seated in the perfectly shaped seats, you will find all switches, circuit breakers and instruments logically arranged according to their system function. All other controls are located exactly where you expect to find them. Check the view through the large glazed area of the sliding canopy. Have you ever felt more comfortable in any other cockpit?

The draught-free ventilation provides comfortable cockpit temperatures even on extremely hot days. When heating is required, the exact temperature can be set by the heater mixing lever.

Do you prefer a control stick or a yoke? Tell us your preferences and we will equip your G115 to meet your needs.

In many countries, the wearing of a parachute is mandatory for aerobatic flying. Most aerobatic aircraft sacrifice seating comfort because of this. Not so in the G115D. Remove the back cushion from the seat backrest and you have room for a back parachute. Physical restriction caused by a parachute is a thing of the past with the G115.



The **G115D instrument panel** is optimized for aerobatics. It increases the

forward view and has enough space for customer specific instrumentation.

The technology



The constant-speed propeller

The high-thrust, three-blade constant-speed propeller of the aerobatic G115D.



Seats and baggage compartment

The backrest is equipped with a removable cushion that can be replaced by a back parachute. The generous baggage compartment takes up to 40 kg of luggage.

The G115 – your reliable partner

As already described, we supply the G115 in two versions. Both versions can be equipped for all additional requirements, including glider towing. With IFR equipment the restrictions of VFR flight are overcome.

All versions of the G115 have excellent flying characteristics and are exceptionally well balanced and gentle mannered aircraft. The aircraft is exceptionally easy to take off and land. Only extremely short take-off and landing distances are needed on both concrete and grass runways.

Innovative noise reduction measures ensure that even extremely stringent noise emission regulations are fulfilled to allow unrestricted use of the aircraft.

By utilizing a few main groups, which are chiefly manufactured from aluminum, the number of control system parts has been considerably reduced. This results in minimal maintenance effort and costs.

With the G115 we have introduced an aircraft in which not only the material philosophy, but also the outstanding economy is convincing.

The G115 is the modern way to enjoy many hours of pleasure in the air. Its design makes it an ideal machine for hard daily use as a cross-country and training aircraft.

We provide our customers with an aircraft which will be a true friend and a reliable partner in all situations through many years of service.



The engine

Two variants of the internationally proven Lycoming engine are available for the G115: the 160 HP version in the G115C and – for the G115D – the more powerful 180 HP version with inverted flight fuel and lubrication systems.



The sliding canopy

The canopy can be slid a long way back to provide unrestricted access to the large cockpit and to allow easy loading of the baggage compartment.



The nose wheel steering

On the ground the G115 is exceptionally easy to handle due to its excellent nose wheel steering system.

The anti-spin strake

Even the basic version of the G115 is cleared for spinning.



Safety / Technical data

The airframe of the G115 meets the damage tolerance requirements of the certification authorities.

For the purposes of this demonstration the parts under test are intentionally damaged. These mistreated components must now survive long term tests under extreme environmental conditions. The G115 passed all these tests with flying colours. In the static load test a load factor of more than 13 g was demonstrated for the wing.

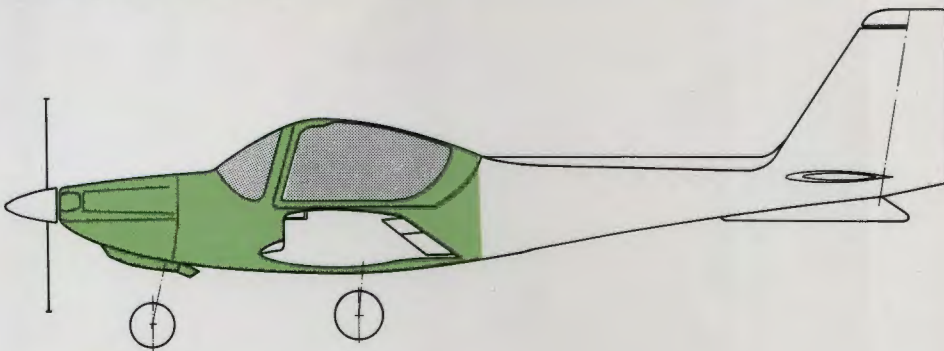
Under the critical eyes of our test engineers, severe tests have been performed on the highly stressed control system parts. The results of these tests exceeded our expectations.

It goes without saying that state-of-the-art technology with respect to crash safety was applied in the design of the airframe. The strong fuselage of the G115 – made from glassfibre-reinforced plastic – is like a life insurance.

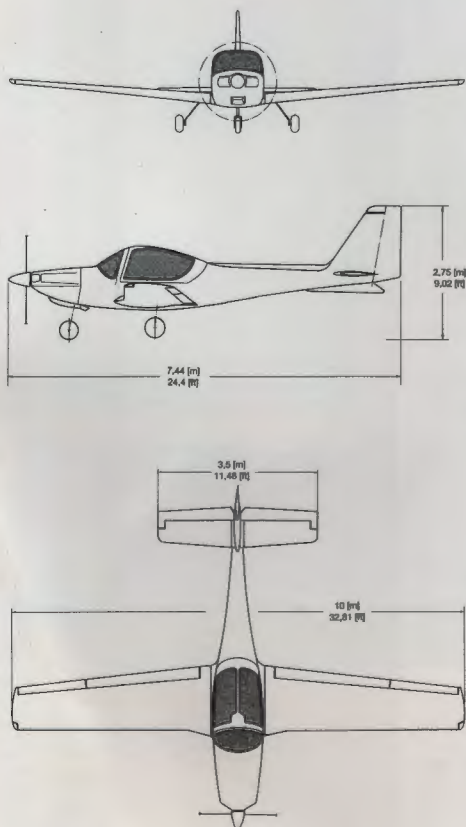
Safety, safety and more safety – this is one of the recipes for success in our company. A materials laboratory – equipped with the most modern test equipment – allows precise analysis of the materials used such as resin/hardener, reinforcing fibres, fillers and metals. The materials are only released to the production department after successful completion of all required tests.



Static load test of the wing



The crash-survivable cockpit



Technical Data		G115C	G115D
Lycoming engine		O-320	AEIO-360
Performance	HP	160	180
Propeller		Sensenich 2-blade	Hoffmann 3-blade
Wing span	m	10	10
Length	m	7.44	7.44
Height	m	2.75	2.75
Wing area	m ²	12.2	12.2
Aspect ratio	–	8.2	8.2
Max. take-off weight	kg	920	920
Payload	kg	260	250
Fuel capacity	ltr	140	140
Wing loading max.	kg/m ²	75.4	75.4
Max. horizontal speed			
MSL/ISA	kts / km/h	135/250	146/270
Cruise speed			
75%, 5000 ft ISA	kts / km/h TAS	130/241	135/250
Rate of climb			
MSL/ISA, MTOW	ft/min	1270	1500
Stall speed	kts / km/h	46/85	46/85
Take-off run			
MSL/ISA, MTOW	m	240	210
Take-off distance over 50 ft obstacle, MSL/ISA, MTOW	m	380	330
Range at 45% BHP			
5000 ft ISA, rsv = 0	km	1200	960
"G"-limits	–	+ 4.4/-1.76	+6/-3



The new G115 series is available in two versions:

The basic version is the G115C. Its 160 HP Lycoming engine makes it an ideal training and cross-country aircraft.

The aerobatic G115D was designed for more sporty ambitions. It is equipped with a Lycoming 180 HP engine and a three-blade constant-speed propeller and will impress any ambitious aerobatic pilot. The roomy cockpit, the virtually panoramic view through the generous glazed area of the sliding canopy and the fantastic performance make the G115D the perfect aircraft for military initial training.

Take a seat in the cockpit of the G115:





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